Commander's Environmental & Energy Management Review Board (CEEMRB)

1 December 2011

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, PE
Environmental Officer

Agenda

- Status of FY11 Objectives and Targets
- FY12 Objectives and Targets
- Upcoming Environmental Compliance Evaluation (ECE)
- Current Environmental Compliance and Environmental Management System (EMS) Status
- MCIPAC and Installation-Level EMS
- MCIPAC Environmental Policy Statement
- QRP Committee Meeting
- Energy Update ([redacted])

FY11 EMS Objectives

Objective 1: Reduce the impact of solid waste generation	
Target	**Status**
Divert 50% of non-hazardous solid waste from the waste stream by FY15 (FY11 Target: 42%)	Exceeded FY11 target Achieved a 43% reduction
Divert 60% of construction and demolition debris from the waste stream by FY15 (FY11 Target: 52%)	Status cannot be confirmed. Working with ROICC and Army Corps to obtain better data.

FY11 EMS Objectives

Objective 2: Reduce electricity use in buildings	
Target	**Status**
Reduce energy intensity of facilities by 37.5% by FY20 using FY03 as baseline (FY11 Target: 3% reduction from FY10)	Did not achieve target
Produce or procure18.3% of energy consumed by facilities from renewable sources by FY20 (FY11 Target: Complete design for Photovoltaic projects)	FY11 Target achieved Completed design for renewable energy projects

FY11 EMS Objectives

Objective 3: Reduce vehicle air emissions and fuel consumption	
Target	Status
Reduce use of petroleum products by vehicle fleets by 30% by FY20 using 2005 as baseline (FY11 Target: 4% from FY10)	Exceeded FY11 target Achieved a 4.8% reduction

FY12 EMS Objectives & Targets

Objective	Target
1. Reduce the impact of solid waste generation	1. Divert 50% of non-hazardous solid waste from the waste stream by FY15 (FY12 Target: 44%) 2. Divert 60% of construction and demolition debris from the waste stream by FY15 (FY12 Target: 54%)
2. Reduce electricity use in buildings	Reduce energy intensity of facilities by 37.5% by FY20 using FY03 as baseline (FY12 Target: 3% reduction from FY11)
3. Reduce vehicle air emissions and fuel consumption	Reduce use of petroleum products by vehicle fleets by 30% by FY20 using 2005 as baseline (FY12 Target: 3% from FY11)
4. Reduce the impact of HAZMAT storage and usage	Reevaluate the HAZMAT Authorized Use List (AUL) process

Environmental Compliance Evaluation (ECE)

- FY12 Benchmark ECE – MCB Butler, MCAS Futenma
  - Conducted by HQMC on a 3-year cycle
  - Dates: 25 Jan – 10 Feb
  - Purpose: Assess the Command's environmental compliance status and recommend appropriate corrective/preventive actions or improvements
  - Process:
    - Review documentation
    - Interview personnel
    - Conduct field/site visits
  - Scope: Evaluate based on requirements from JEGS, OEBGD, and Marine Corps policy for each environmental media area

Current Environmental Compliance Status

- Plans need to be completed/updated:
  - Spill Prevention Control & Countermeasures Plans (2 completed, 2 in draft, all completed in-house)
  - Pest Management Plan (updating current plan)
  - Potable Water Master Plan (4 out of 7 completed)
  - Fuel Tank Management Plan (coordinating draft with DLA Energy)
  - Stormwater Pollution Prevention Plan (updating)
  - Spill Prevention and Response Plan (updating)
- Inadequate staffing of the Natural Resources and Cultural Resources Programs
- Overall tank management issues

Common Unit-Level Deficiencies

- Hazardous materials (HM) deficiencies
  - No labels on containers
  - MSDSs don't match HM being used
- Hazardous waste (HW) deficiencies
  - Open containers of HW
  - No secondary containment for liquid HW
  - Unknown HW in containers
  - Containers were not in good condition
- Solid waste deficiencies
  - Recyclables mixed with trash
  - Waste batteries mixed with trash

Current EMS Status

- MCB Butler EMS was one of the four highlighted EMS Success Stories in the 2011 DoD Strategic Sustainability Performance Plan
- EMS fully implemented since 2007
- MCBJ EMS currently in conformance with Marine Corps standards
  - Minor non-conformance self-reported in FY11 for SPCC Plans
- Major updates needed in FY12
  - MCO P5090.2A Change 3 expected early next year requiring significant changes in EMS
  - MCIPAC EMS requirements
  - New web-based tracking systems

MCIPAC and Installations

- MCIPAC EMS
  - Environmental Policy Statement
- Installation-Level EMS (Butler, Iwakuni, Fuji, Mujuk, Hawaii)
  - Risk Ranking
  - Objectives and Targets
  - Operational Controls (SOPs, etc)
  - Checking and Corrective Action (ECEs)
  - Cross Functional Teams and Senior Management Review

MCIPAC Environmental Policy

- MCIPAC Environmental Policy Statement drafted
- Will replace MCBJ policy
- Installations in Japan and Korea will not be required to have a separate policy
- To comply with Marine Corps Order, MCB Hawaii must maintain an installation-level policy that commits to cleanup of contaminated sites

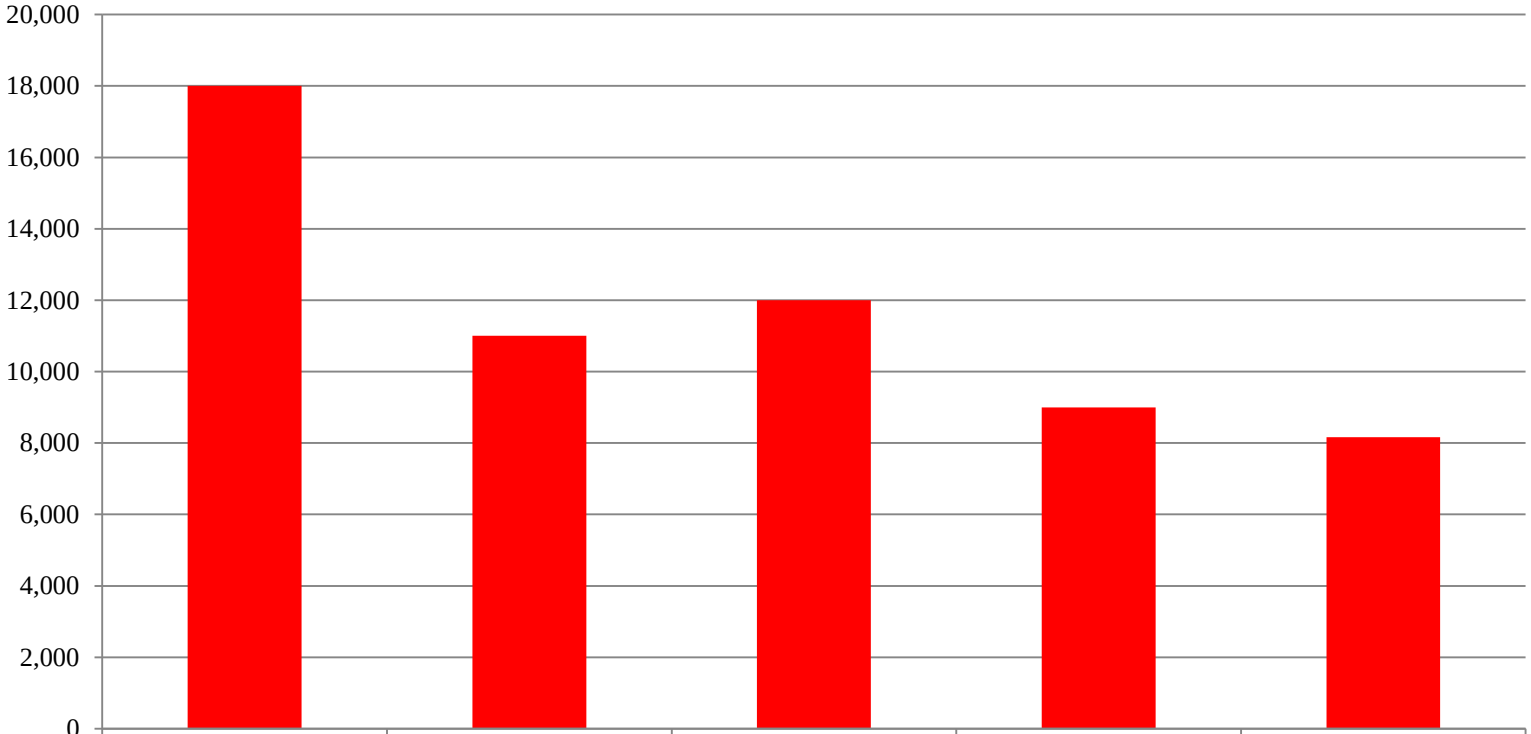
How Commanders Can Help

- Emphasize the following to your units:
  - Maintain clean, well managed hazardous material storage and hazardous waste accumulation areas
  - Clean small spills quickly; call 911 for large spills
  - Properly dispose of all waste prior to deployment
  - Support recycling program in living and work areas, especially in barracks
- Maintain close contact with your camp/station environmental staff

Qualified Recycling Program (QRP) Committee

FY11 Solid Waste Incinerated

Amount of Solid Waste Generated by MCB Smedley D. Butler



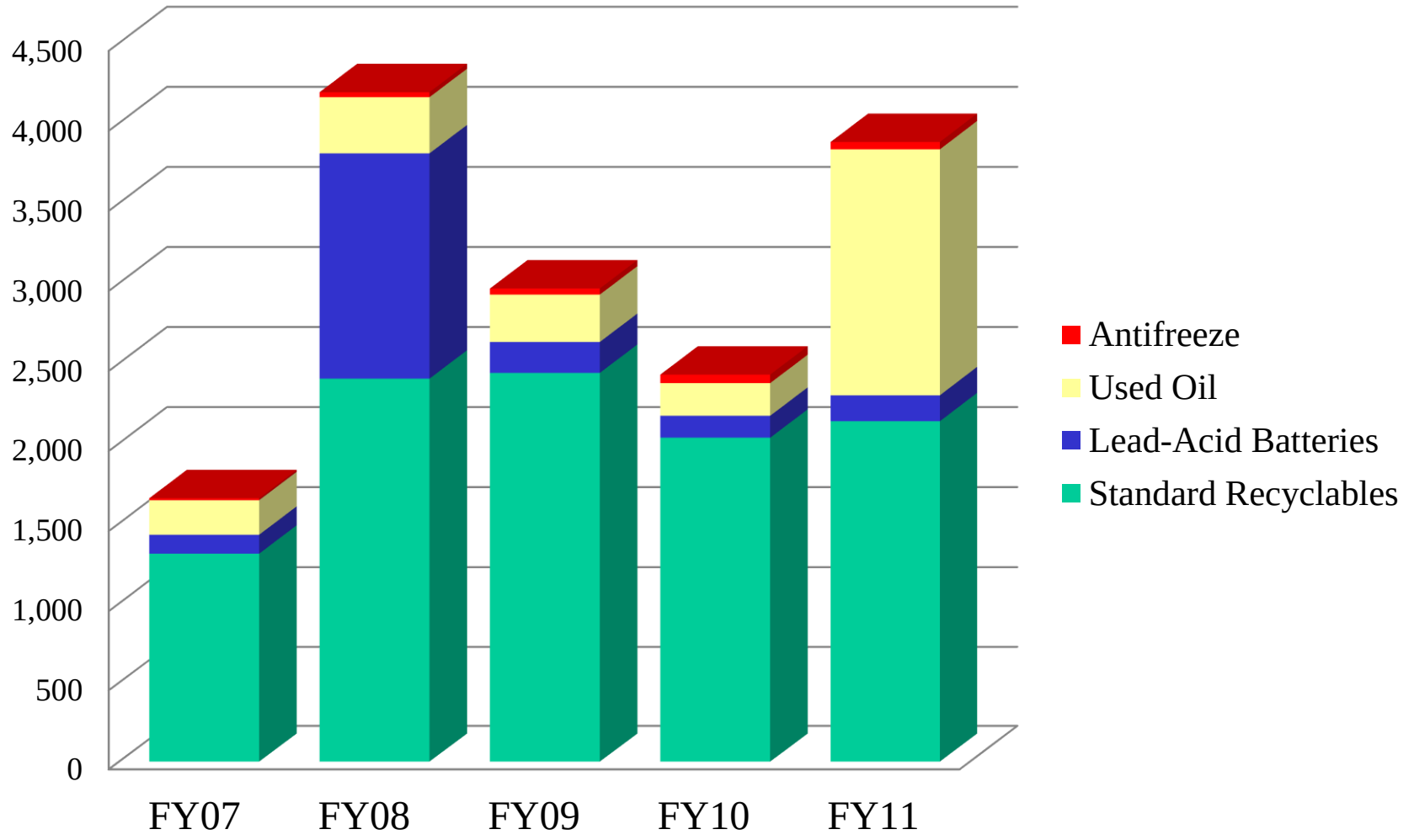
	FY07	FY08	FY09	FY10	FY11
SW Incinerated (Ton)	18,000	11,000	12,000	9,000	8,165

FY11 Diversion Rate

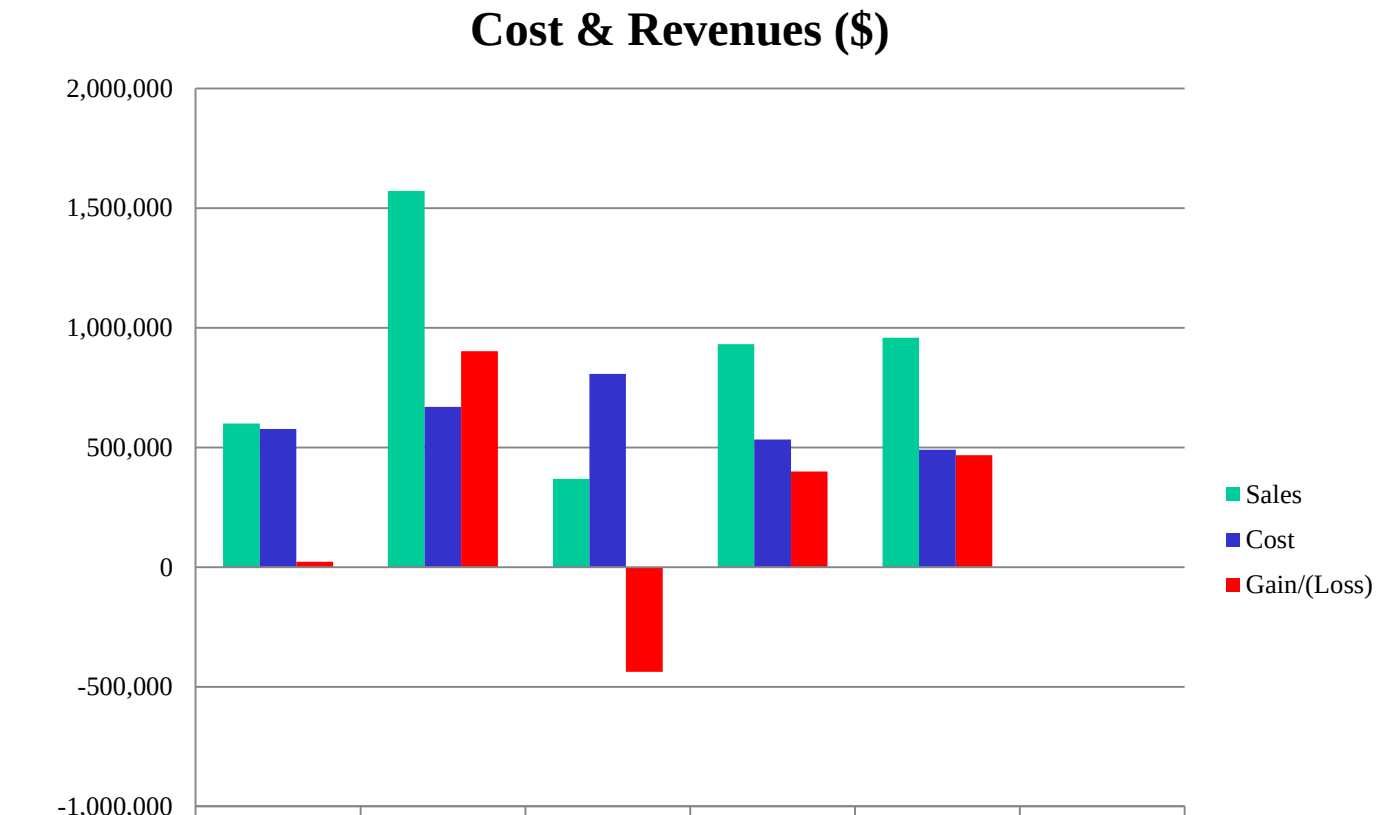
Achieved 43% diversion rate in FY11

Solid Waste Treatment/Disposal Facility, Okinawa City

Tons Recycled



QRP Finances



	FY07	FY08	FY09	FY10	FY11	
Sales	599,478	1,572,131	368,838	931,746	958,891	
Cost	577,729	669,430	807,204	532,657	490,899	
Gain/(Loss)	21,749	902,701	-438,366	399,089	467,992	

Action Plan to Meet FY12 Diversion Target (44%)

- Procure Vehicles (~$170K)
  - Trucks
  - Bobcat
- Procure Equipment (~$250K)
  - Sorting conveyer
  - Truck scale
  - Magnetic Can Separator

Questions?

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LtCol Jansen

FY 10 Energy Consumption

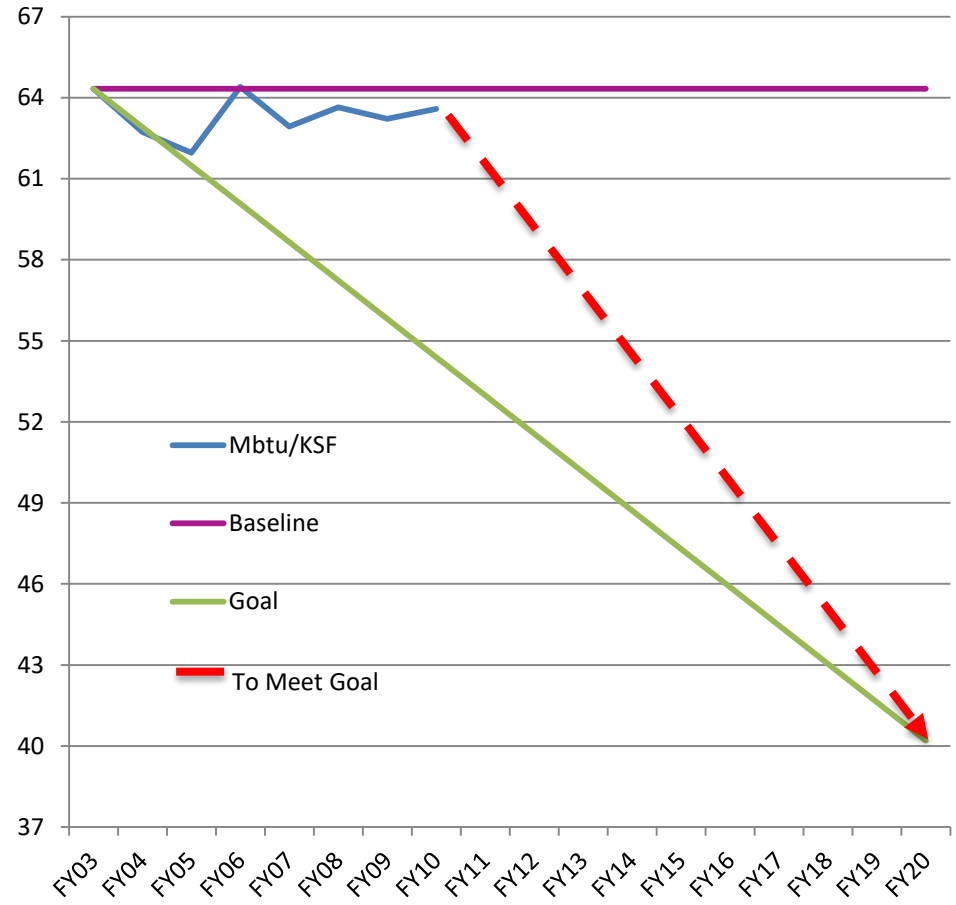
Electricity

- **315,000MWH / $37M**

Water

- **806MGAL / $6.4M**

Energy Intensity and Challenges

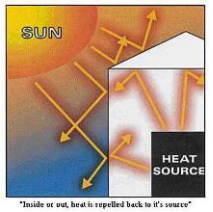


- Reduction of 1.16% from baseline (13 of 16 Installations)
- Must reduce 4% each year over 9 years to meet 2020 goal
- FY 10* Intensity of 63.58 MBTU/KSF (7 of 16 Installations)

- Challenges
  - Wasteful Culture
  - Consumption Visibility
  - Designs, renovations, and Japanese Facilities Improvement Program (JFIP)
  - Increased Requirements
    - Automated Systems
    - Anti-Terrorism Force Protection (ATFP)
    - Occupying facilities vice demolition

Way Ahead

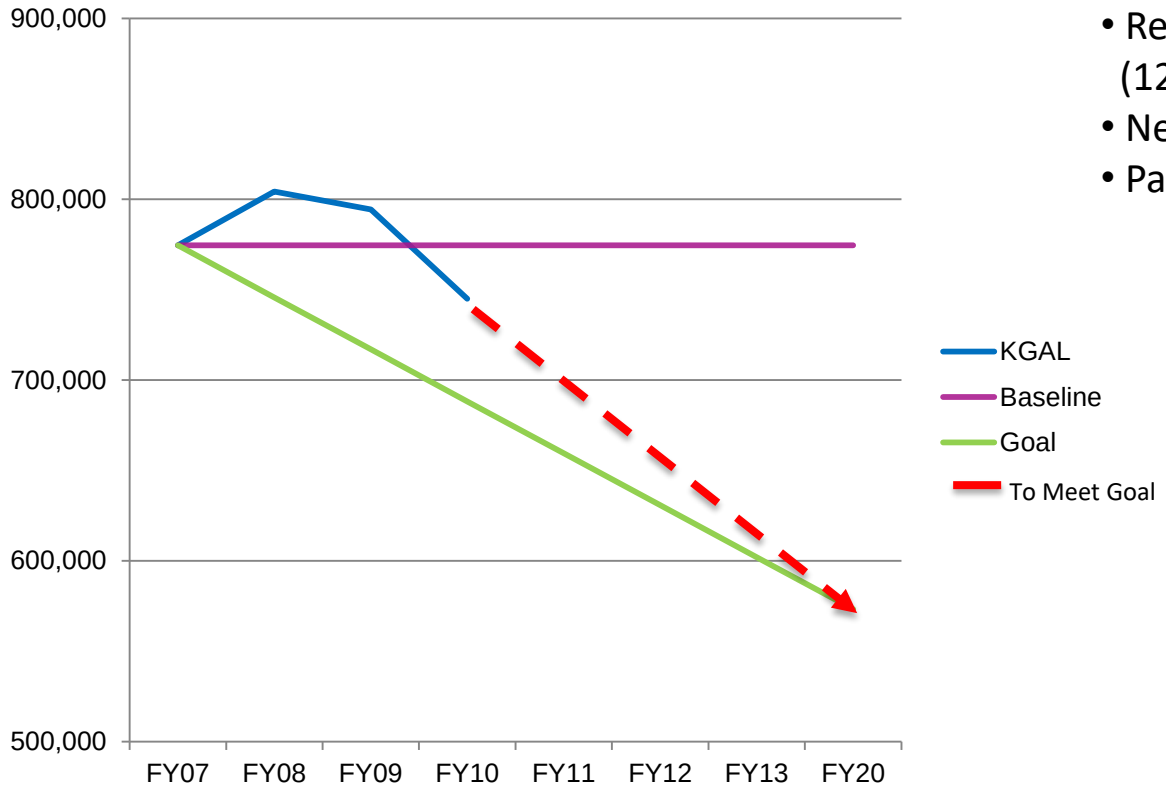
- Resource Efficiency Managers (REMs)
- Building Energy Monitors (BEMs)
- Campaign Plan and Base Orders **(A/C shutoff)**
- Advance Metering Infrastructure (AMI)
- Thermal Coating Paint, Window Tint
- Chiller and Wind technologies
- Green FIP – Solar, Light Emitting Diode (LED)
- Energy Savings Performance Contract (ESPC)
- Energy star appliances/computer equipment
- Optimized building automation control pilot project
- Exploring Waste to Energy potential



A/C Shutoff

- MCBJO 5090.3A
  - Dec – Mar shutoff for most facilities (includes split units)
  - A/C Exemption List - Justifications
  - Up to 25% savings per building during shutoff period
  - Historic savings 8-10% across Camp Butler when enforced
  - Estimated cost avoidance *could have been*
    - Jan 2011 = $494,982
    - Feb 2011 = $471,727
    - Jan/Feb 2011 savings *could have been $966,709*
- Allows
  - Critical maintenance and parts replacement
  - Reduced unexpected equipment failures

Camp Butler Water Consumption



- Reduction of 4% from baseline* (12 of 16 Installations)
- Need to reduce 2.75% per year until 2020**
- Past and Current challenges
  - Old Infrastructure (breaks, sinkholes, mud slides, earthquakes), leakage, flushing, pressure, pools

Way Ahead

- Futenma/Foster Water Leak Survey
- EIP or ECIP on water lines
- Low flow fixtures and sensors during renovations and new construction
- Campaign plan
- Energy star appliances
- Planned EIP or ECIP to address water flushing need (loop system)
- Design training for engineers
- Optimization training for maintenance personnel (sewage plant)